Summer 2018

FIRST PRINCIPLES QUARTERLY

First Principles Capital Management, LLC

First Principles Capital Management is an investment management firm with expertise across the global fixed income securities and derivatives markets. The firm provides highly customized investment portfolios for its clients, which include prominent endowments and foundations, financial institutions, industrial corporations, pension funds, family offices and trusts.

The investment team has extensive experience and a noteworthy history of innovation in the debt capital markets. The investment process and client service model is founded on the principle that it is necessary to gain an understanding of client-specific objectives, constraints and idiosyncratic factors in order to design and execute on the optimal strategy for each client. The orientation of the team facilitates a continuous relative value assessment within and across fixed income asset classes.

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CIO LETTER

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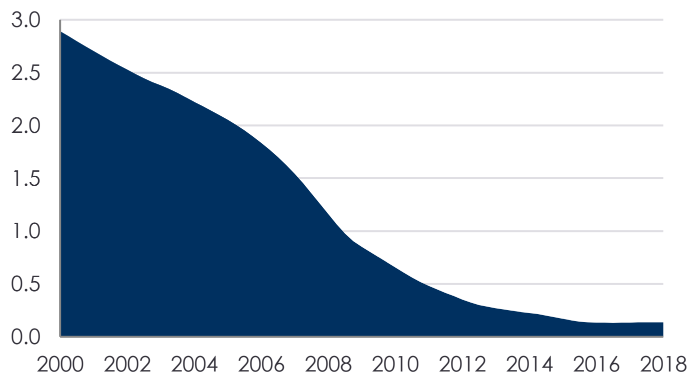
Neutral corner

The recent Monetary Policy Report (MPR) issued by the Board of Governors of the Federal Reserve[1] addressed the complexities of employing monetary policy rules as one of the special topics. Embedded in the analysis were allusions to: (1) the observation that the neutral real rate over the longer run appears – it is unobservable – to be substantially lower than what was experienced pre-crisis, (2) the difficulty of providing enough monetary accommodation – historically cutting rates by, on average, 5% – to stem a downturn when the nominal neutral rate is probably closer to 3% than 5%, and (3) minimizing the risk of inducing a recession by gradually raising the policy rate.

Chart 1: Laubach/Williams estimate of neutral real rate [%]



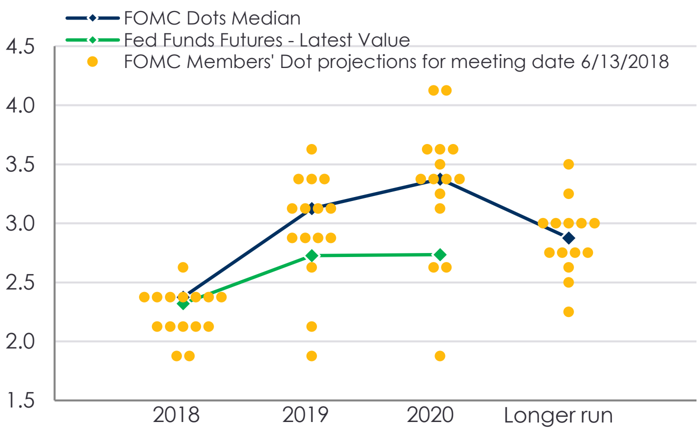
Source: Federal Reserve Bank of San Francisco

The regime shift in the real rate as estimated by the statistical models followed by the FOMC has undeniably had an impact on its views. When you examine the evolution of the dot projections for the long-term fed funds rate (nominal neutral rate), two disturbing trends are readily apparent: (1) the median estimate has been steadily, but not monotonically, reduced from 4.25% in 2012 to 2.875% at the last meeting in June, and (2) the dispersion in the estimate has grown progressively wider with one member's estimate at 2.25%. If the neutral rate is capped at 3% or 3.375% (median estimate for year-end 2020), will the resumption of

[1] https://www.federalreserve.gov/econres/notes/feds-notes/dont-fear-the-yield-curve-20180628.htm

reinvestment or QE4 be necessary to supplement the FOMC's toolkit in the next downturn?

Chart 2: FOMC dot plot [%]



Source: Bloomberg

The risk that QE may be a permanent part of monetary policy (*vide*, Japan) is amplified when contrasting the FOMC's forecasts with market implied rates. Year end market implied rates for 2019 and 2020 are approximately 2.70%, which are well below recent FOMC projections of 3.125% and 3.375%. The market has been consistently less sanguine – and correct – about prospects for the economy and the path to normalization since 2008. What risks/concerns are driving a wedge between the two outlooks?

Yield curve inversion

As the yield spread between 10-year Treasury notes and 2-year notes approaches zero – spread has moved from 55bp to 25bp YTD – there is heightened concern that a recession is imminent given the predictive powers of the yield curve cited in academic research and the persuasive empirical data prior to the last three recessions. In fact, one member of the FOMC, Kashkari, recently published a piece that indicated that "policymakers are paying increased attention to the so-called flattening yield curve," rates are close to neutral, and as a consequence "[we are] moving to a contractionary policy stance." And he resoundingly rejects the hypothesis that this time may be different because of the epic scale (magnitude and tenor) of central bank intervention following the financial crisis as he points to similar pronouncements that policy makers proffered in 2006. Ex-Chairman Bernanke was, however, recently quoted as saying "… inversion of the yield curve has been a good [indicator] of economic downturns [but] this time it may not [because] of regulatory changes and quantitative easing …".

This June, the Federal Reserve published a note titled *(Don't Fear) The Yield Curve*[2], which argues that "long-term spread[s] are statistically dominated by … near-term forward spread (difference between the implied three-month Treasury Bill rate 18 months forward and the current three-month Treasury Bill yield)" in terms of predicting recessions. At present, the prevailing level does not indicate a recession in the next year – probability of approximately 20%. [See Winter 2017-18 FPQ for First Principles's perspective on yield curve inversion.]

Domestic fundamentals

Domestic economic conditions are overall quite strong and according to Chairman Powell "the economy is in a really good place." The Federal Reserve projects 2018 GDP to be 2.8%, unemployment at 3.6%, and PCE inflation at the policy target of 2.0%. All of these projections have been improved since the FOMC March meeting and in aggregate is the most buoyant economic assessment in more than a decade.

The one blemish on the outlook is the fact that, although inflation measures have rebounded from the low levels observed in 2017 to 2%, there remains some angst that inflation and wage growth in particular still remain at odds given strong job growth and a robust economy. In the latest The Beige Book, the Federal Reserve continued to lament that both wage increases and prices were, on balance, "modest to moderate." And the surge in the unemployment rate from 3.8% to 4% in June indicated that the labor market may not be as tight as it appears as 600,000 workers who were not previously looking for work entered the job force, which will necessarily mitigate wage pressure.

The specter of a protracted and escalating assault on international trade through tariffs will undoubtably have a

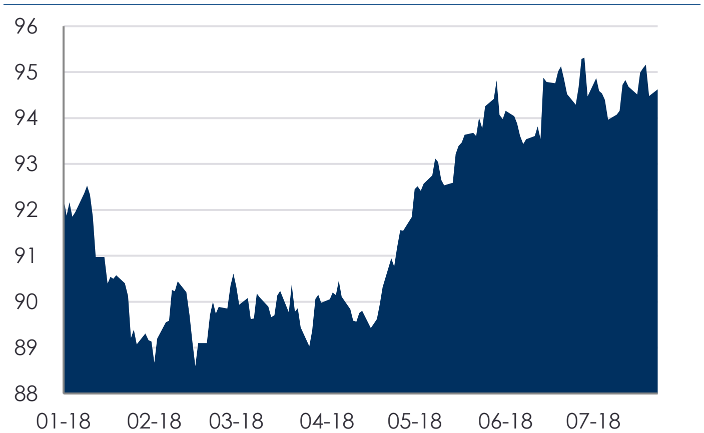
[2] https://www.federalreserve.gov/monetarypolicy/files/20180713_mprfullreport.pdf

deleterious impact on not only domestic economic activity, but also the global economy. Quantifying the impact on growth and inflation is premature – and extraordinarily complex – given how fluid the actions and countervailing practices are at this point. What is certain is that capital expenditure programs are likely to be delayed if not curtailed until there is greater certainty about the outcome of these initiatives.

Global outlook

The euphoria that prevailed at the beginning of 2018 surrounding the synchronized global growth story has been buffeted by disappointing results in Europe, China, Japan, and a group of non-oil producing emerging markets. The IMF's July 2018 World Economic Outlook did not change its forecast for global growth, but did indicate that the balance of risks are clearly to the downside of those estimates. The report cited moderating macroeconomic data, tightening of financial conditions, dollar strength, policy error as China deleverages non-bank (shadow) lenders, geopolitical factors (e.g., Italy), and of course trade tensions as some of the key risks.

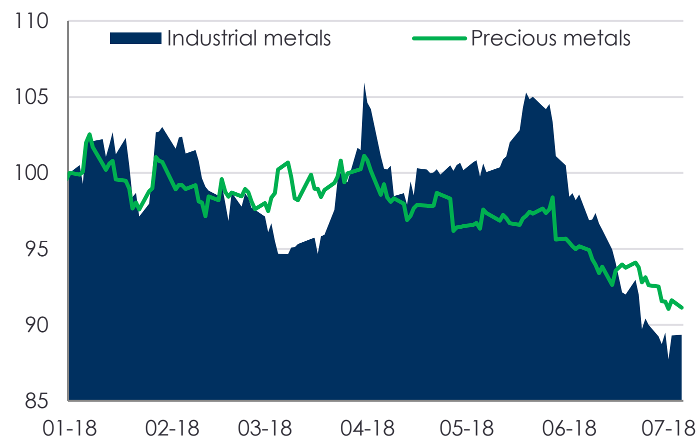
Chart 3: US Dollar index



Source: Bloomberg

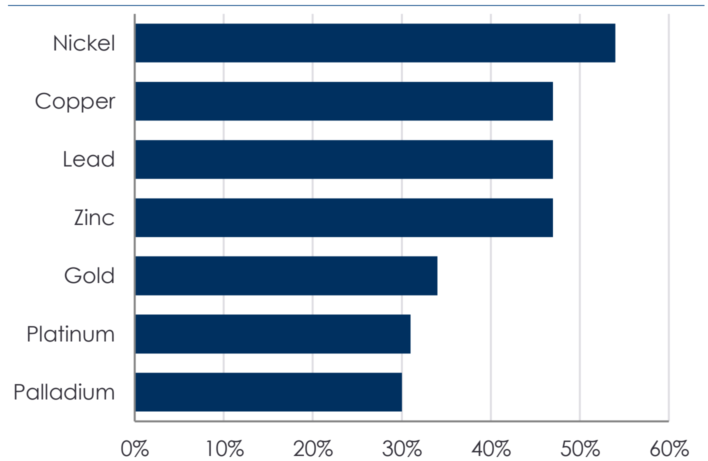
The depth of concern is best exemplified by the sharp decline in the prices of metals in the commodity market. Since mid-June, the prices of industrial metals have plunged nearly 15% and precious metals have fallen by 7%. Much of this owes to slowing growth prospects in China as it now comprises 15% of global GDP and overwhelmingly dominates commodity markets. It consumes approximately 30% of the precious metal complex and roughly 45% of the industrial metal complex. Although GDP has moderated at 6.7% – for more or less two years – the recent performances of the yuan – which has devalued 5% in the last month – and the local equity market – which is in correction territory for the year – are indeed troubling signs for global growth in 2H of 2018.

Chart 4: Metals total returns [normalized]



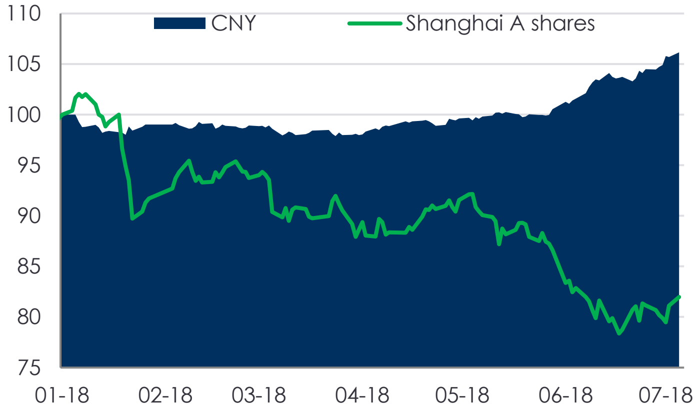
Source: Bloomberg

Chart 5: China's share of global consumption



Source: Macquarie Bank

Chart 6: CNY and Shanghai A shares YTD performance [normalized]



Source: Bloomberg

Recapitulation

The passing reference to the average cumulative rate cuts that the FOMC would need to reverse a downturn in the economy imbedded in a special topic of the MPR may not have been completely innocent as there was clear recognition that "… if the neutral real rate is currently at the low end of ... the estimates … [then] it may not be feasible to provide the levels of accommodation." Kremlinologists might conclude that the FOMC may, in contrast to the Yellen FOMC, not waver with its plan for further gradual increase in the policy rate until it sees the whites of stalling growth's eyes.

Throughout the excessive market volatility experienced in 2018 that followed the VIX implosion, Libor-OIS spike, emerging market turmoil, and trade tensions, the FOMC maintained a steady hand and allowed the markets to process the crises without any hints of potential support.

As always, there exists the hackneyed wall of worry. And the anxiety over lackluster inflation, uncertainty around trade, and the potential for global – and China in particular – growth slowing is well founded. But given the small sample on this FOMC's reaction function, its mission to normalize rates is unlikely to change without hard evidence.

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MUNICIPALS

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QUICK READ

- Municipals held steady in Q2 while Treasuries edged lower
- Markets were rangebound, with very little volatility
- Low supply and investor apathy are among culprits for low volatility
- If volatility returns, it may be sparked by sovereign credit concerns
- A number of factors are providing a ceiling on US rates

Municipal bond market stays put for the quarter

Generally, the municipal bond market significantly outperformed the Treasury market in the second quarter of 2018 – observable by the AAA Bloomberg General Obligation Bond (AAA GO) yield's rally of 3 basis points (bp), compared with Treasuries' selloff of 14bp over the same period.

Zero volatility environment

While zero volatility is an exaggeration, volatility had been extremely low during the second quarter as illustrated by Chart 1 below. For the quarter, the 10-year AAA GO yield moved within a tight range of 13bp, versus the 10-year Treasury yield's range of 28bp throughout the quarter.

Chart 1: 10yr AAA GO yield [%]

Source: Bloomberg

Where is the volatility?

Volatility in the municipal bond market has remained subdued as the asset class finds itself caught between a rock (low supply) and a hard place (investor apathy). Supply for the first two quarters of this year was down 18.5% compared with issuance over the same period last year. Although banks have been sellers, most of the paper put into the market was with maturities seven years and in. As such, supply/demand dynamics continued to favor long-maturity bonds. However, with the entire AAA GO yield curve at or below 3.0%, investment managers had been loath to add long duration paper to their portfolios, and this lack of appetite kept long-maturity yields from freefalling. The result was a quiet, apathetic market lacking volatility.

What's going to shake up the municipal bond market?

We expect the dynamics contributing to low volatility, which shaped the municipal bond market for a substantial portion of 2018, to persist into the second half for reasons threefold: 1) even though supply will pick up compared with the first two quarters, there will be plenty of eager investors (demand) seeking to take advantage of higher yields should they materialize; 2) the market will come to interpret the trade war between the US and the rest of the world as long-term recessionary, causing the Treasury yield curve to flatten further, or even invert; 3) global central banks (governments) are still collectively proving effective at suppressing long-term interest rates, capping long-maturity yields.

We believe a true jolting of the municipal bond market (out of the current state of complacency) will not occur until late this year, or even into 2019. And we do not believe that it will start with municipal credit, rather with sovereign credit, such as US Treasuries. The seeming collusion of the Federal Reserve with the Treasury Department to connect the tapering of the Fed's balance sheet with larger issuance of Treasury Bills will shorten the duration profile of US sovereign debt. This will coincide with our government's need for increased debt issuance due to larger deficits – from the Tax Cuts and Jobs Act and the debt ceiling hike. Additionally, if US trade deficits with China begin to decrease due to the new tariffs, China may start to shrink foreign currency reserves, lessening demand for US Treasuries. If a recession does take hold as a result of a trade war, more likely than not the US government may be compelled to enact a fiscal stimulus package, further exacerbating our debt burden.

Aforementioned are headwinds facing the US Treasury market. However, we do not foresee a scenario wherein the market wakes up to this reality until late this year or into next year. In the meantime, market focus should be on the potentially recessionary impact of the escalating tariffs and their respective, potentially negative, effect on risky assets – a focus that should keep a lid on long-maturity yields for the time being.

RATES

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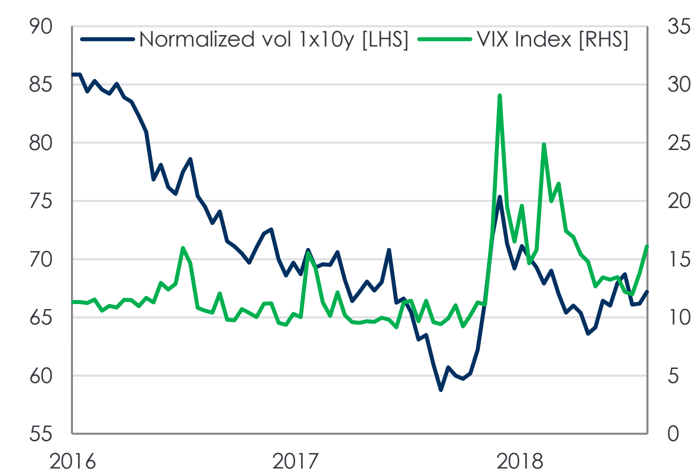
QUICK READ

- The market weathered blips encountered Q1 and Q2
- Greenback strength has increasingly become a focal point for markets
- Fledgling SOFR maintains promise for wide adoption

Ready, set, wait… markets awaiting the next shoe to drop

During 1Q18, the market reacted negatively to mild wage inflation prints in the US causing: 1) a spike in volatility (Chart 1), and 2) an underperformance of risky assets. However, during the second quarter, the panic subsided and the quarter closed with positive performance from equity markets, rangebound Treasury levels, and a flatter yield curve (Chart 3). Economic data in the US has been encouraging in terms of growth and labor market strength, which allowed the Fed to continue its rate hiking cycle. During Q2 the market was challenged with political issues in Italy, Spain, and Germany, exerting downward pressure on global rates. However, as global growth expectations continued to remain firm (led by the US), the market recovered rapidly. The 10-year Treasury (Chart 4) reached its highest level since the summer of 2011 by mid-May (3.11%) – however, stretched short positioning combined with risk-off positioning (driven by political noise from Europe) caused the 10-year to retrace and close merely 13 basis points (bp) higher than the previous quarter closing level. The main destabilizing risk on the horizon for markets is an escalation of trade wars.

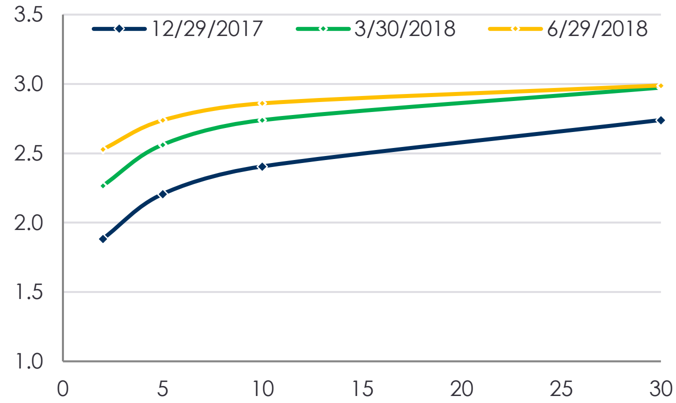
Chart 1: Volatility



Source: Bloomberg

RATES

Chart 2: Treasury yield curve [bp]

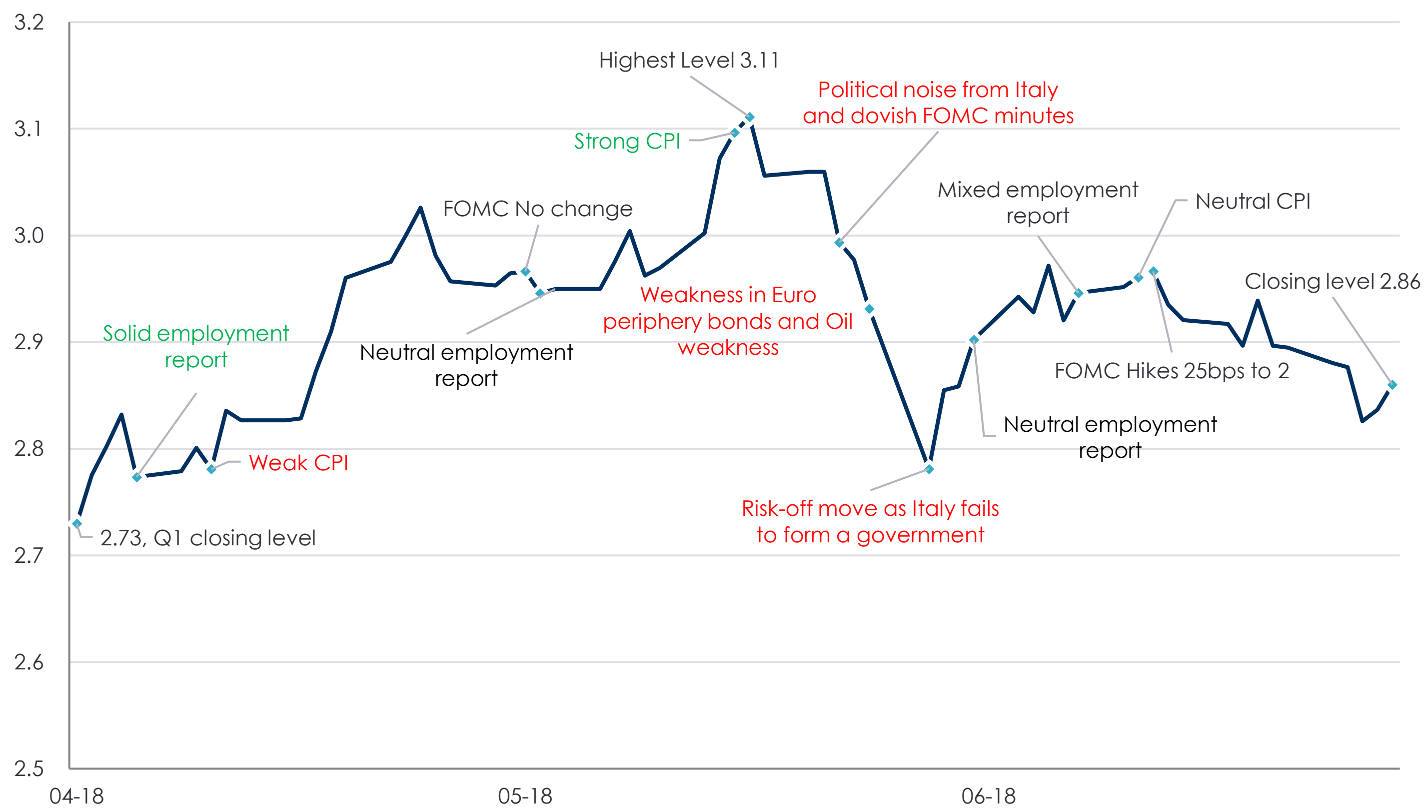


Source: Bloomberg

Chart 3: 30yr UST yield minus 2yr UST yield [bp]

Source: Bloomberg

Chart 4: 10-year Treasury yield [%]



Source: Bloomberg

RATES

USD strength – friend or foe to Treasuries?

The broad-trade weighted USD has appreciated 8% since 2018 lows and has nearly reversed 2017's movement. A continuation of dollar appreciation caused by the escalation of trade wars has the potential to dampen growth, tighten financial conditions, and challenge the Fed's monetary tightening trajectory. Furthermore, some market participants are concerned that recent dollar strength could cause increased selling of long-dated Treasuries by foreign central banks – especially China – to protect currencies or leverage reserves as a negotiating tool on the trade front. The last time reserve managers sold Treasuries aggressively was in 2015-2016, which caused significant cheapening of Treasuries vs swaps. However, the impact might be more contained in the current scenario – or at least less surprising – due to a confluence of factors, not limited to: 1) a few major economies have increased policy rates over the last year, 2) reserve managers have already sold $60bn of Treasuries since the dollar appreciated in April this year, and 3) China's holdings of Treasuries tend to be short-dated – Barclays estimates it could be a paltry $80bn of the $1.3trn Treasury holdings in the 10-year+ sector. For further context regarding point 3, the outstanding universe of Treasuries with maturities 10 years and greater held privately is $1.4trn. The other side of the dollar-strength coin is potential demand due to EM outflows as a reversal of the carry trades that began in 2016.

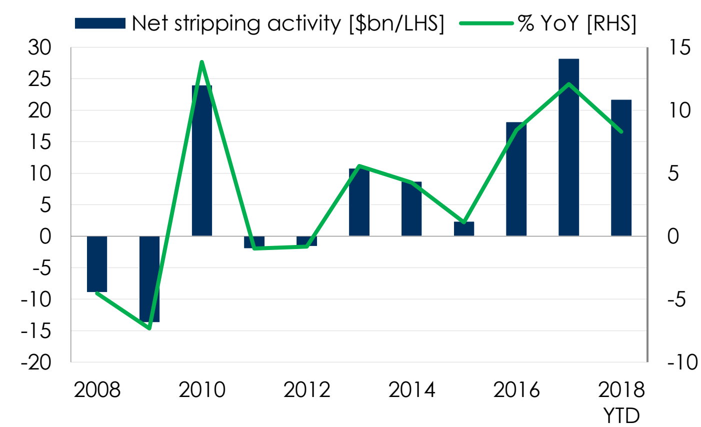
On the other hand, domestic demand for long-dated Treasuries remains strong with potential to persist as pension and insurance companies continue to steadily bid duration in the face of a looming Sept 15, 2018 deadline on deductions for pension contributions at a higher tax rate – 35% before vs 21% following. As such, and illustrated in Chart 6, STRIPS monthly data show that, through May, STRIPS universe increased by $21bn compared with $12bn last year.

Long-dated Treasuries richened 13bp vs swaps to a swap spread level of -6bp, driven by easing bank balance sheet constraints, a flattening Treasury curve, and swap-paying flows from variable annuity hedgers.

Chart 5: Broad-trade weighted dollar

Source: Bloomberg

Chart 6: YoY stripping activity



Source: Treasury Direct

SOFR

At the beginning of April, the Fed started publishing Libor's replacement for the benchmark rate for interest rate derivatives – Secured Overnight Financing Rate (SOFR). Since launching in April, the rate has evolved in line with other secured overnight rates. At the beginning of May, the SOFR futures market started trading in CME with 7 monthly and 20 quarterly contracts. Trading volumes in these new markets are still minuscule but promisingly increasing. CME plans to launch SOFR-based OIS swaps as well as basis swaps against fed funds and Libor. The development of a robust SOFR futures market will be key to the advance of policy rate reform.

INFLATION

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QUICK READ

- TIPS outperformed nominal Treasuries in Q2
- Inflation continues upward trend
- Specter of planned trade tariffs and potential trade wars increasingly weigh
- Working population demographics affect inflation and that of the US will likely exert upward pressure

TIPS should continue to perform

Treasury Inflation Protected Securities (TIPS) outperformed nominal Treasuries in Q2 as breakeven inflation rates widened 4-7 basis points (bp) across the curve. Inflation swaps recorded gains ranging from 13bp in the front-end to 7bp on 30-year maturities. The outperformance of swaps over cash securities owes to the widening of swap spreads across the curve. For the quarter, the Bloomberg Barclays TIPS index returned 0.77% and 10+ year Bloomberg Barclays TIPS index returned 1.48%, compared with 0.10% and 0.31% respectively for the corresponding nominal Treasury indices. The modest net change in Q2 breakeven inflation belies the dramatic short-term fluctuations that characterized the period – a 15bp rally in the first half of the quarter was wiped out a few weeks later by Italian market instability. As the market stabilized in June, breakevens recovered and closed up 7bp. The "flight to quality" episode in May, albeit a brief one, reaffirmed the previously observed behavior of TIPS underperforming corresponding nominal Treasuries during periods of market stress. Notably, the 10-year nominal rallied 3% compared to 1.8% for 10-year TIPS, resulting in TIPS beta of 0.6.

Both headline and core inflation have been trending upward in 2018 and have recovered to above 2% from the lows of 1.8% last summer (Chart 1). Strengthening inflation is even more clearly illustrated by median CPI, which at 2.8% is at its highest level since the 2009 recession. Overall, the firming trend is broad-based and extends over most categories of the CPI basket. Furthermore, cyclically sensitive inflation growth has outpaced already strong inflation numbers[1]. Wages, however, have remained stagnant despite low unemployment – a paradox that has dampened inflation numbers. A recent study by the IMF[2] found that wage stagnation can be attributed to a persistent decline in both labor productivity growth and the share of income attributable to labor in general. There continues to be downward pressure on wages for occupations that are exposed to automation and off-shoring. In addition, Stock and Watson[1] found that wages that are largely dependent on local markets, such as those for restaurant and hotel staff, exhibiting greater elasticity to unemployment. Despite such complex hindrances on wage growth, inflation has been

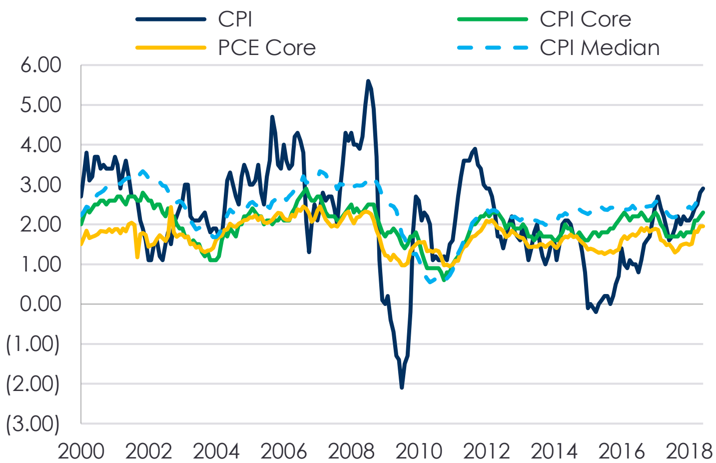
[1] Slack and Cyclically Sensitive Inflation, James Stock and Mark Watson., June 2018

[2] Understanding U.S. Wage Dynamics, Yasser Abdih and Stephan Danninger, IMF, June 2018

INFLATION

steadily increasing. The Federal Reserve recognizes this strengthening trend in inflation and continues to signal an extension of the ongoing rate hike cycle. Market expectations point to an additional 1- 2 rate hikes by the end of this calendar year.

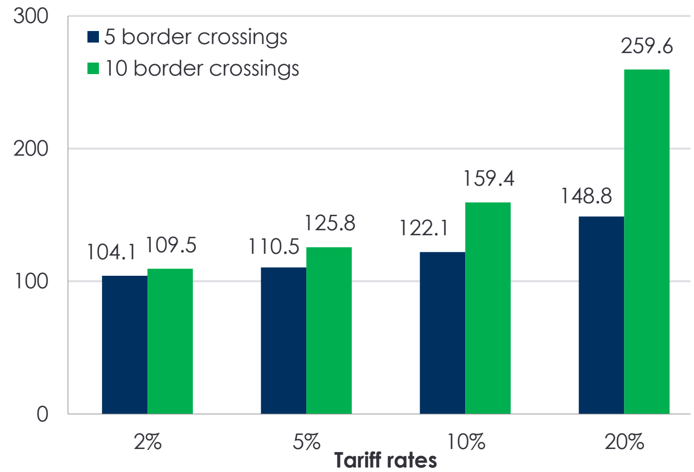
Chart 1: YoY inflation [%]



Source: Bloomberg

A wild card in the future of inflation guidance is residual effects of recently imposed and planned trade tariffs and potential trade wars. Economists estimate direct import penetration of the US CPI to be around 6.2%, leading to a manageable one-time impact on inflation of 0.3%-0.5% from trade tariffs. However, a recent OECD study[3] shows that the tariffs will likely be more burdensome on low-income households. Increasing globalization over the last few decades has led to the development of extensive Global Value Chains, where inputs for a final good are sourced from across the globe. Imposition of tariffs has the potential to throw these arrangements into disarray. The OECD study estimates that, for finished manufactured goods with 5 or 10 border crossings (both highly reasonable numbers), final costs could increase by 150% and 260% respectively (Chart 2). Chairman Powell recently highlighted the risk, albeit a small one at this stage, of sustained periods of high tariffs on a wide range of products in negatively impacting growth while enhancing inflationary pressures.

Chart 2: Final product price (value added of 100)



Source: OECD (2012)

While recent developments vis-à-vis trade tariffs have clouded the short-term macroeconomic picture, data point to strength in future underlying inflation. The NY Fed's Underlying Inflation Gauge (UIG), a broad-based inflation measure that utilizes metrics other than prices, is a good indicator of the economy's true inflation level. The June UIG came in at 3.33%, its highest value since 2005 (Chart 3). The UIG is considered to be a forward-looking indicator and thus potentially portends higher future CPI prints. Underlying inflation strength can also be evaluated from a demographic perspective. A recent BIS paper postulates that inflation pressure is dependent on the share of working age population; a higher working age population eases inflation, while a higher share of dependents increases inflation. The research concludes that over the last two decades this relationship has led to a 7% disinflation in the US. This effect is now likely to work in reverse as the baby-boomer generation rapidly transitions into retirement.

[3] Making Trade Work for All, OECD, May 2017

INFLATION

Chart 3: FRBNY Underlying Inflation Gauge [%]

Source: Bloomberg

In summary, the current macro-economic environment is more likely to deliver positive inflation surprises than to not. With this macro-picture in mind, TIPS will likely continue to outperform corresponding nominal securities.

MORTGAGE-BACKED SECURITIES

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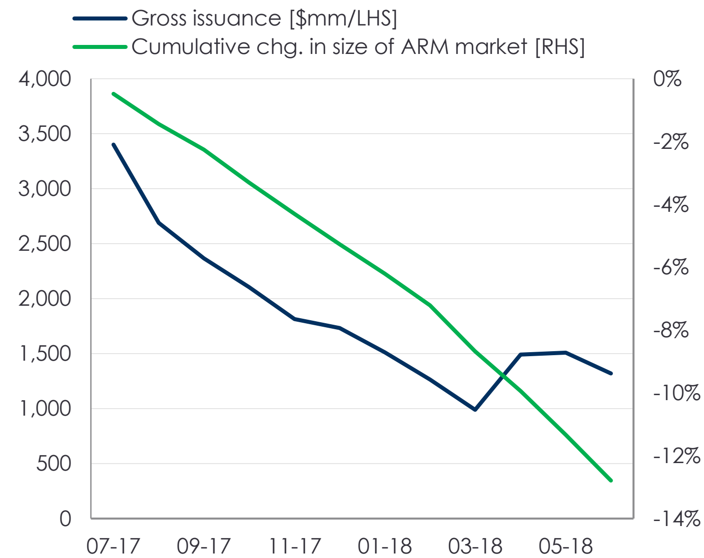
QUICK READ

- Higher rates have made hybrid ARMs less attractive to borrowers of late
- Prepayments have remained robust, driven by incentive for fixed-rate refinancings
- Post-reset hybrid ARMs have widened significantly
- IOs off post-reset hybrid ARMs starting to look attractive adjusting for burnout

ARMed and dangerous

Over the past 12 months, mortgage rates for 5/1 hybrid ARMs[1] shot up 73 basis points (bp)[2] – making hybrid ARMs much less attractive to borrowers. During this time, the gross issuance of hybrid ARMs steadily declined, and with it the size of the market dropped by almost 13% (Chart 1).

Chart 1: Higher rates → less issuance → less ARMS



Source: eMBS

Typically, as rates rise, prepayments slow, helping to offset the decline in gross issuance. However, this has not been the case in this instance. While higher mortgage rates caused the percentage of hybrid ARM-to-hybrid ARM loan refinancings to drop by over 50%[3], refinancings into fixed rate mortgages have picked up the slack. In fact, 94% of hybrid ARM loans that refinanced in Q1 of 2018[4], refinanced into a 15-year or 30-year fixed-rate mortgage.

The scarcity of hybrid ARMs, created by decreasing gross issuance combined with elevated prepayments is a positive

[1] Hybrid ARMs are mortgages that have a fixed interest rate for a certain number of years, typically 5, 7 or 10 years, after which they convert to floating rate mortgages that are typically indexed to 12-month Libor or 1-year CMT (constant maturity Treasury). A hybrid ARM with a 5-year fixed rate is known as a 5/1 ARM, 7-year as a 7/1, and 10-year as a 10/1.

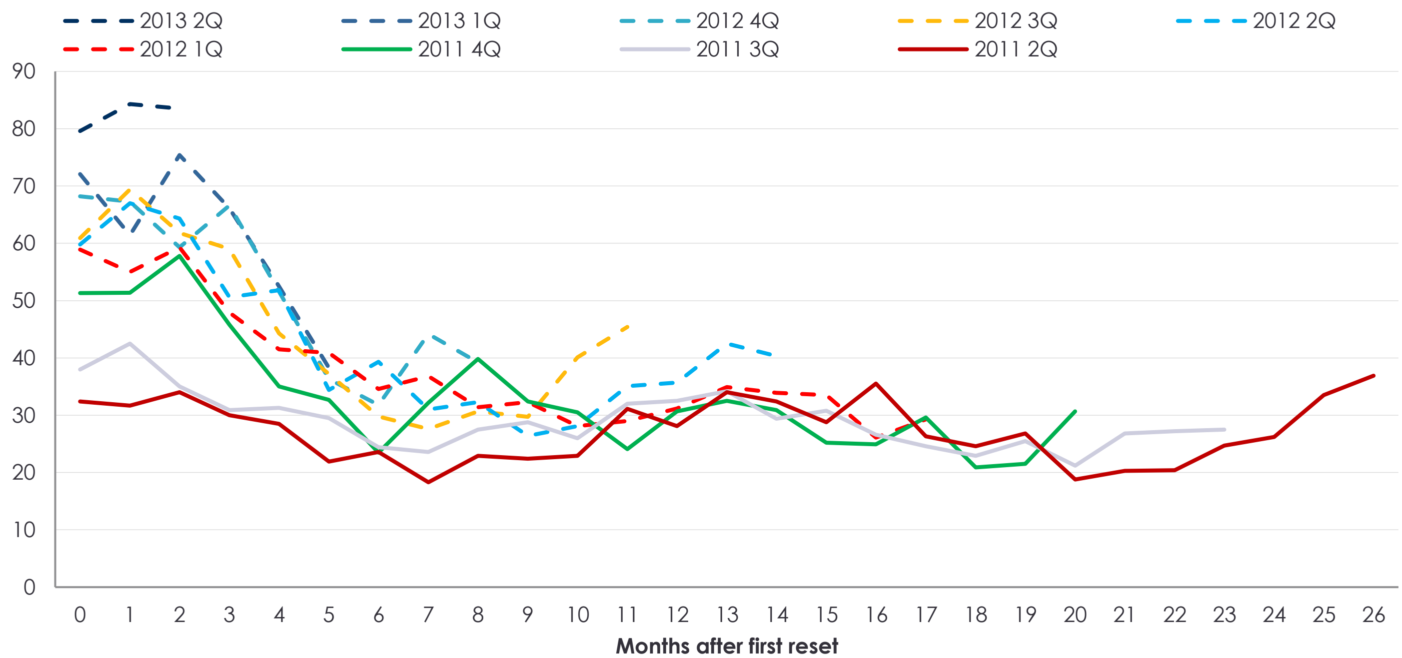
[2] Source: Freddie Mac

[3] Source: Freddie Mac

[4] Q2 is not available at time of writing.

MORTGAGE-BACKED SECURITIES

Chart 2: Prepayments have increased for post-resets [CPR %]



Source: eMBS

technical for the market. However, elevated prepayments are a double-edged sword, as these high prepayments are concentrated in post-reset hybrid ARMs[5]. Over the past year, 12-month (12M) Libor has increased 100bp, yet 30-year mortgage rates have only increased approximately 60bp. This has given hybrid ARM borrowers whose mortgages have converted to floating rate increased incentive to refinance into a 30-year fixed rate mortgage. As Chart 2 shows, prepayments on more recently issued cohorts of loans[6], which have converted to floating rate mortgages, have been paying much faster than in the past.

This is a problem because post-reset hybrid ARMs typically trade at a premium to par. On average, hybrid ARMs float with a spread above 12M Libor of 1.70%, but currently they trade at a spread of approximately 25bps, which roughly equates to a price of 102-16 for a 5/1 hybrid ARM. Historically, when post-reset prepayment speeds were lower, these bonds traded at roughly 106-00 – 3.5 points higher! Therefore, while supply is tight in new production hybrid ARMs, we recommend investors pay close attention to the value of post-reset tails.

Interest Only (IOs) CMOs off post-reset hybrid ARM collateral have performed even worse than the pools; they have lost approximately 15% of their value this past year. Looking at the last chart, prepayment speeds on post-reset ARMs burn out after some time. While recently reset ARM IOs are negative carry at current prepayments, we think some bonds have begun to look attractive when accounting for burnout.

[5] Once hybrid ARM pools start floating, they are referred to as post-resets

[6] 5/1 Fannie Mae 12-month Libor

CORPORATE CREDIT

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QUICK READ

- The swift and complete liquidation of offshore USD corporates has yet to materialize
- However, there has been substantial and steady flows back to US soil
- Currently, there is little incentive for firms to aggressively repatriate

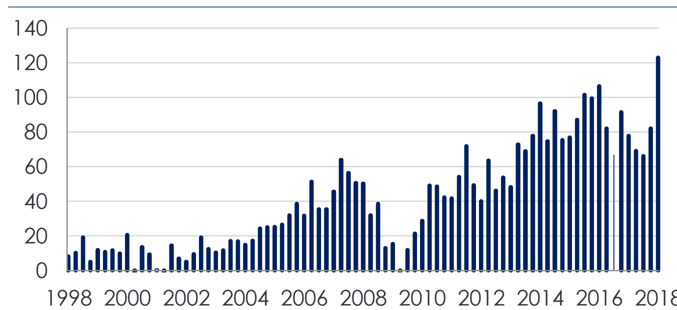
An inconvenient truth about repatriation

Capital management plans of large US multinational corporations have been scrutinized since the passage of the Tax Cut and Jobs Act in December 2017, which reduced the tax rate for repatriating cash held offshore. This prompted rising concern that the provision would precipitate an unwind of these corporations' large, liquid investment portfolios to fund shareholder-friendly activities – share buybacks and dividends – and sparked a selloff of short-dated investment grade bonds (additional technicals contributed to rising yields on the front end of the Treasury curve). The precipitous rise in credit spreads in the first quarter has rekindled interest among investors as to whether a selloff of similar magnitude might recur. Predictably, the cash repatriated has been largely deployed toward shareholder-friendly activities. Yet, a scenario wherein these investment holdings are immediately and completely unwound appears remote. Recent data largely support such a view.

Bringing cash home

Repatriation flow in 1Q18 amounted to $75bn – roughly 8% of the cash and marketable securities holdings for the fifteen US multinationals with the largest cash holdings overseas. It has been extensively documented that share buybacks for investment grade issuers reached record levels in 1Q18, increasing by half QoQ and 58% YoY (Chart 1). The 25 firms with the largest cash holdings accounted for two-thirds of the increase. Repatriated cash has also been utilized for financing in lieu of new issuance. Indeed, YTD bond issuance for the technology sector, which has the most cash offshore, declined by a steep 78% YoY. This compares to growth rates averaging nearly 30% over the past four years in this sector.

Chart 1: Share buybacks for US IG companies [$bn]



Source: BofA

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Another selloff

Cash and short-term investments – which consist of a combination of cash, corporate, and government bonds, as well as equities and other investments – represented $892bn in 1Q18 for the largest fifteen cash-rich US investment grade companies – an 8% decline YoY. The reduction in liquid holdings was concentrated in corporate bonds held overseas, as shown in (Table 1). Anticipation of repatriation-driven sale of corporate bonds ultimately provoked a widening of the front-end of the US investment grade spread curve during Q1– 23bp (+42%) in the 1-3 year sector, versus only 11bp (+8%) for the 10+ year bucket. However, once the reporting season progressed and fear of repatriation flow subsided, the short-end of the investment grade corporate index rallied and strongly outperformed the longer-end, and the credit spread curve steepened (Chart 2).

Table 1: 15 largest US corp holders of overseas cash [$bn]

Cash & Marketable Securities	1Q17	1Q18	% Change / $ Change
Cash & equivalents	191.9	173.7	-9% / -18bn
Bonds	756.6	698.9	-8% / -58bn
Equity	11.7	9.3	-20% / -2bn
Other mixed	6.6	9.5	+43% / -3bn
Total	**966.8**	**891.5**	**-8% / -75bn**

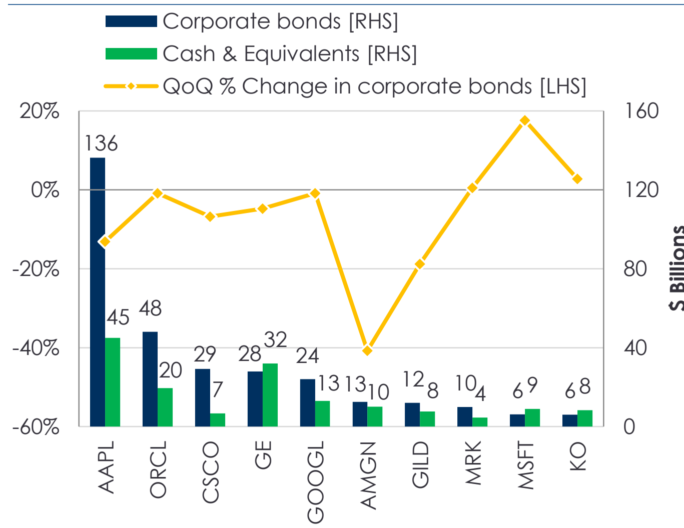
Source: JPM

Chart 2: 10+yr minus 1-3yr IG spread curve [bp]

Source: BofA

Nonetheless, it is interesting to note that following the passage of the recent tax legislation, these companies' approaches toward their securities portfolios evinced no consistent overall trend; some modestly reduced their holdings, while others moderately increased their holdings (Chart 3). Of the fifteen investment grade companies that hold the largest corporate holdings overseas, only Apple and Amgen stood out for reducing their corporate holdings by significant amounts. A more granular look at the composition of their corporate bond portfolios also reveals that most of these bonds mature within a year – ranging from 18% to 92% for the largest 5 holders of overseas cash. Clearly, US corporations feel little pressure to sell their investments given the short-term nature of their exposure. Furthermore, bond holdings are largely concentrated within a few companies, with five comprising 81% of holdings for the fifteen largest US cash-rich firms. These companies are generally in good financial health, benefit from robust domestic cash balances (in the case of Apple, $45bn of cash), and none are facing imminent liquidity or debt refinancing pressures that would entice them to liquidate their investments. In fact, most of these companies have excess liquidity thanks largely to robust operating cash flows even as leverage in the aggregate remains at elevated levels (Chart 4). Hence, it is hard to lend credence to the case contending an imminent liquidation of large US firms' corporate holdings, especially given that the law allows eight years to repatriate at the new tax rate.

Chart 3: US cash-rich firms with largest corp holdings as of 1Q18



Source: HSBC, Bloomberg, Company 10Qs, as at 3/31/2018

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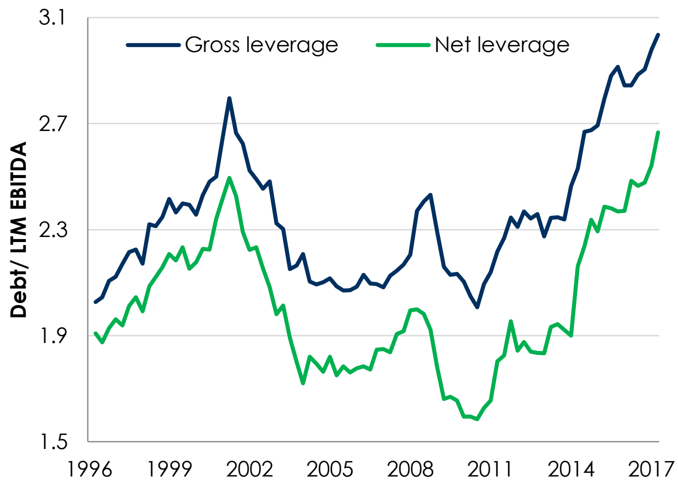
Chart 4: Investment grade leverage



Source: BofA

Conclusion

A radical change in large US companies' corporate holdings seems unlikely, and so does the risk of an ensuing repatriation-induced selloff of short-term investment grade spreads. However, in a market environment wherein investors are continually incentivized to move into riskier investments to achieve higher returns given generally unattractive valuations, further market pullbacks on the short-end should present attractive opportunities.

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QUICK READ

- The much-feared retail apocalypse hasn't much affected retail credit card ABS
- We discuss a recent case in point: the bankruptcy filing of a major department store retailer Bon Ton and its effects on World Financial Network Credit Card Master Trust (WFNMT)
- The sponsor bank for WFNMT has taken proactive steps to properly manage the risks and has voluntarily boosted enhancement for all bond series in the trust
- Performance remains decent, with manageable charge-off rates and robust excess spread
- Retail credit card ABS can handle retail apocalypse well, given the strong enhancement and sponsor banks' risk mitigating measures

Private label credit card ABS can handle retail bankruptcies well

Six months ago we commented that the ostensible retail apocalypse had no discernibly negative effect on retail private label credit card ABS. We maintain this view and we'll discuss a recent case: World Financial Network Credit Card Master Trust (WFNMT). After the bankruptcy filing of major department store retailer Bon Ton, charge-off rate at WFNMT remained under control and the sponsor bank has taken steps to boost enhancement and support for the credit card trust. The much-feared retail apocalypse hasn't affected retail credit card ABS much, given the strong subordination (enhancement), excess spread (first loss protection), and credit card sponsor banks' proactive measures to appropriately manage portfolio risk.

WFNMT is the second largest private label credit card trust in the US (after Synchrony). Bon Ton Retail Group, which represented 11% of the trust's total receivables at the end of 2017, filed for Chapter 11 bankruptcy protection in February 2018 and announced in April that the department store chain would liquidate by this summer. One might be naturally concerned. WFNMT's charge-off rate did go up to 9.54% in February 2018, up from 7.63% in January, but has steadily fallen since then to 8.08% in June this year. One-month excess spread (yield minus charge-off and cost of funding) has improved slightly since February to 19.31% in June.

Contrary to pontification of "severe consequences for WFNMT", the trust's actual performance so far has turned out reasonably well. Why? In response to Bon Ton's bankruptcy and liquidation, Comenity Bank (the sponsor and servicer of WFNMT) announced that the Bon Ton credit cards would no longer be accepted as a form of payment starting April 19 and all open card accounts would be closed on June 28, 2018. The bank will continue to notify Bon Ton card holders of their inescapable obligation to make payments until their balance is paid in full. Over the past three decades, WFNMT is used to taking proactive measures to mitigate risks in its portfolio when retailers file for bankruptcy and during economic downturns. In the latter case, WFNMT will slow

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down new account openings and reduce credit limit to people with lower credit scores.

Furthermore, to ABS investors' consolation and pleasant surprise, WFNMT filed an amendment to ABS documents on May 3, 2018, boosting enhancement for all bond series in the trust by adding or increasing required excess collateral amount ranging from 2.22% to 3.33%. This voluntary credit enhancing amendment was done to add further support to the trust given heightened concerns around Bon Ton and credit normalization trend. On May 4, Fitch affirmed ratings of all WFNMT bonds and changed the rating outlook on Class C notes to Stable from Negative. All other class notes remain stable.

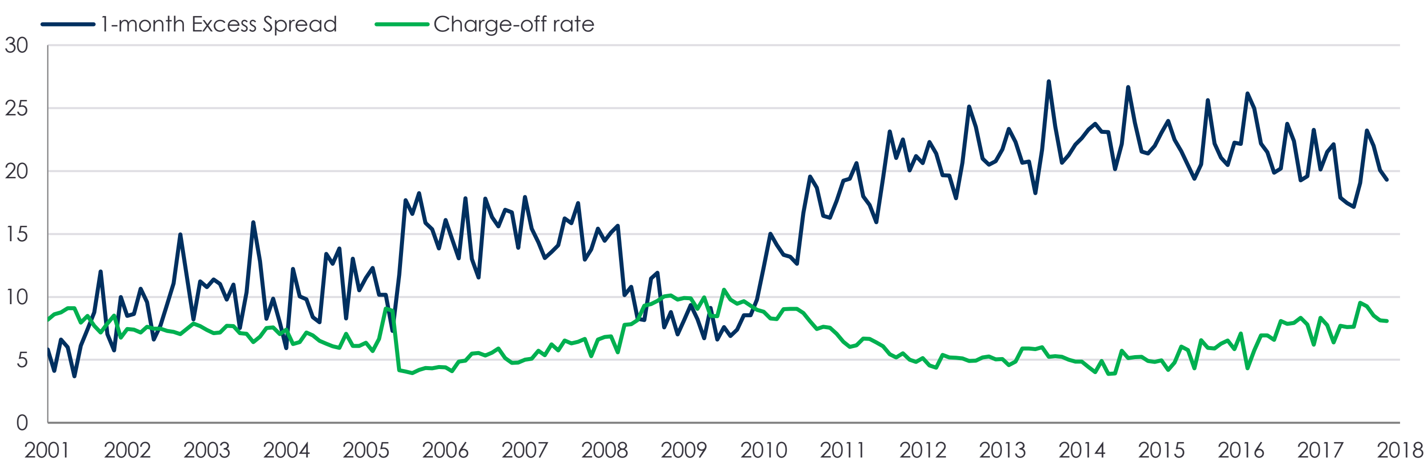
Historically, credit card sponsor banks have stepped in to support their ABS trusts, as in the aftermath of the Great Recession. WFNMT is not new in this effort. They want to keep open access to the valuable ABS funding source.

Table 1: World Financial Network Credit Card Master Trust- WFNMT

Composition of Retailers as of 12/31/2017	Total Receivables	% of Total Receivables	Number of Accounts	Percentage of Total Number of Accounts
L Brands, Inc. (mostly Victoria's Secret)	$ 1,895,346,000	23.5%	14,824,000	17.6%
Bon Ton Retail Group (filed Chapter 11 on 2/4/2018)	$ 895,561,000	11.1%	7,033,000	8.3%
Ascena Retail Group (Lane Bryant, etc.)	$ 808,223,000	10.0%	10,388,000	12.3%
Stage Brands Group	$ 605,319,000	7.5%	5,860,000	6.9%
Retailer Groups less than 7.5%	$ 3,860,046,000	47.9%	46,382,000	54.9%
Total	**$8,064,495,000**	**100.0%**	84,487,000	**100.0%**

Source: WFNMT Prospectus

Chart 1: World Financial Network Credit Card Master Trust (WFNMT) performance [%]



Source: Bloomberg

Note: WFNMT data from 5/2012 is from Series 2012-A, data between 8/2010 to 4/2012 is from Series 2010-A, data between 10/2008 to 7/2010 is from Series 2008-A, data between 7/2004 to 9/2008 is from Series 2004-A, data between 8/2001 to 6/2004 is from Series 2001-A.